930620CCC2508 X 9386977 4 DATE OF YR MO CAY 9 0 0 8 0 6	2 DATE YR NO OAY NOTICE CODE 1 OFFICE CODE 8 3 0 1 OFFICE CODE 1 OFFICE CODE	EPIDEMIOLOGIC INVESTIGATION REPORT
article which told of a house fire which was allegedly caused by a faulty toaster oven. Upon investigation it was learned that the attorney representing		
the victim had within the past 2 years settled an additional 3 lawsuits which dealt with similar circumstances.		
Home 10. FEST PRODUCT Toggstor Oven		Wisconsin W I Black & Decker Shelton, CT
None 12 AGE OF VICTAM 12 SEX (ILM AUTO	118. TRACETERANO NAME MODEL NUMBER, MANUFACTURES & ACORESS **COM (COM) 14. DESPOSITION	N/A := NUTY : USACSS
No Injury 9 9	Owner 1 12 TYPE 3 Owner 21. CASE SOURCE 22. REVIEWED 5	Y YA NO CAY
INCHARESS CASES CALTS 24. NARRATIVE (See PRITECTION OF CITY SON)		FFCE DIRECTOR REVIEW CATE
Attached 	2 7/7/55	
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CPSC FORM NO. 182 (Revenues 10/85)

APPROVED YOR USZ TERCUGA 5/31/94 OMB NO. 3041-0029





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SUMMARY:

This investigation was initiated through a newspaper article which dealt with a home fire allegedly caused by a defective toaster oven. The fire department estimated damages being approximately \$75,000. Actually claims paid by the insurance companies involved totaled approximately \$52,000. This incident is the subject of a pending lawsuit. The victim's attorney was able to supply testing information on 3 other previous cases all of which involved toaster ovens. He represented the victim in all other cases as well as in the subject case. All of the previous cases have been settled out of court approximately 2 years ago.

PRE-INCIDENT:

The owner of the toaster oven indicated to me that the toaster oven had been purchased by her husband approximately 1 1/2 years prior to the incident date at an area K-Mart Store. She stated that the oven was used regularly, primarily as a toaster; though, it was also used for activities such as warming foods or making fish sticks or french fries and the like.

The owner stated that the oven had not been used at all during the 2 days preceding the fire. The oven was generally plugged into the receptacle in the kitchen of the home. It stood on a butcher block topped storage cart between the refrigerator and the dishwasher.

The owner stated that she did not noticed anything unusual with regard to the operation of the oven prior to this incident.

INCIDENT:

The owner stated that the toaster oven was not used on 8/6/90, the date of the fire. She stated that she left the home to go shopping and run some errands at approximately 2:00 P.M.

Arriving home at approximately 5:45 P.M., she found that her "whole neighborhood was standing in her yard". Smoke was coming from the house windows. A neighbor had already contacted the fire department for assistance.

POST INCIDENT:

The fire department conducted a thorough investigation into the cause of the fire. This investigation included a videotape showing how they proceeded with the investigation. (A copy of this videotape has been sent with this report for review and is marked a exhibit A). No photographs were taken by Fire Department personnel, however an investigator for the insurance company which held the homeowner's policy did take photos. These photographs were requested and are attached as exhibit J.

Due to various items being disrupted by fire fighters, the cause of the fire had been thought to be a cordless hand vacuum cleaner found in a contorted shape near the area of fire origin. The owner stated that the vacuum cleaner however, was not stored on top of the butcher block cart, but rather it was stored next to the cart but near the floor.

Upon having the owner verify that the toaster was kept on top of the butcher block storage cart, the fire fighters placed the remains of the toaster oven on top of the cart and found that the charpattern matched the bottom of the oven perfectly.

As shown on the fire department videotape, the electric outlets in the kitchen area were also checked; but were found to have burn damage to the outside only and were therefore not a contributing factor in this fire. The electric cord to the toaster oven itself was also examined, but found not to show signs of defect such as arcing on the end of the broken cord.

The subject toaster oven was examined by an engineer to attempt to determine the cause of the fire. The subsequent report, attached as exhibit B, indicates that markings on the plugs were found to be identical to a Black and Decker Toaster Oven, model TR35. It further states that examination of the interior of the oven shows that there was not any food in the oven at the time of this incident.

After making observations about various portions of the toaster oven, this report states that the contacts of the bake switch, (which controls both the on/off function as well the temperature setting), are plastic. Warm temperatures are present during

normal use of the toaster oven. The plastic plunger used to push the contacts apart and thereby turn the heating elements off, most likely became deformed from the temperatures present during use. This caused the plunger to become too short to physically perform contact separation properly, allowing the contacts to close and energize the heating elements even with the control switch in the "off" position.

An attorney I spoke to also indicated that the method of ventilation designed into the toaster oven is also being questioned, namely that the air being ventilated out of the appliance through the back, is also allowed to pass through the electrical components of the oven. During this passage, it is questioned whether grease and the like from whatever is being cooked in the oven is being deposited on the electrical components within the oven and possibly contributing to eventual failure.

ADDITIONAL TOASTER OVEN INFORMATION:

The owner's attorney had handled 3 similar cases in the past and was able to supply this investigator with reports detailing product examination in these cases. These reports are attached as exhibit D-F. The attorney stated, however, that due to the fact that these cases all settled 1-2 years ago, it would be impossible for him to supply any additional information with regard to the owner's of the toaster oven such as addresses or phone numbers.

The attorney stated that these cases all involve incidents occurring in 1987 and 1988. All 3 were settled out of court during 1991.

The attached reports give detailed descriptions of the product examinations performed on the toaster ovens in January of 1991. In 1 of the cases, an oven owned by Dorothy Drout, (Exhibit D) caused a fire on 12/13/88. Examination of the unit which was a General Electric brand toaster oven, catalog #A10T26 showed that the fire originated at the contacts of the enterlock switch which reached a temperature level sufficient to ignite adjacent flammable materials. It further states that the condition of the contacts indicates that the bake/broil control had remained in a closed or semi-closed condition which facilitated the flow of

current through the interlock switch. The report therefore indicates that the initiation of this fire was due to defectively performing interlock switch contacts.

In the examination of the Charles A. and Marilyn Miller toaster, (exhibit E) this same engineer indicated that while the actual model is unknown, it is undistinguishable from the other 2 toaster ovens, namely the GE brand catalog #'s AlOT26 and A47114.

Again, he found that the source of ignition was the overheating of the contacts of the interlock switch as both contacts were found to be welded together. The switch reached a temperature level sufficient to ignite adjacent materials, which in this case was a muffin or a piece of toast within the toaster oven.

In the 3rd case, involving a Dorothy Greening, (exhibit F) the toaster oven involved was a General Electric brand, catalog #A4T114.

The cause of the overheating was found to be the bake/broil thermal control contacts which showed evidence of contamination and pitting "which is evidence of their tendency to the stick together".

Also received from the victim's attorney and attached as exhibit G, is some information from the Association of Trial Lawyers of America which summarizes various lawsuits involving toasters and toaster ovens. Inquiries are dated from 1976-1989 and involve various manufacturers including General Electric, Toastmaster, Proctor Silex and Norelco. This investigator contacted all 3 attorney's involved in this case. One of the attorney's had the subject toaster oven and photographs were taken (exhibit I attached). Another attorney had photographs of the scene and these photographs were requested and are attached as exhibit J.

PRODUCT IDENTIFICATION:

Manufacturer: Black and Decker

Shelton, Connecticut

Model:

TRO35

Please note that this is assumed in the examination of the toaster oven report, exhibit B, paragraph 2.3.

ATTACHMENTS:

Exhibits

- A Fire Department Videotape
- B Kragh Engineer Report dated October 2, 1990.
- C Summons and Complaint for case No. 92CV2137.
- D Engineering Report on the Dorothy Drout toaster oven.
- E Engineering Report on the Miller toaster oven.
- F Engineering Report on the Greening toaster oven.
- G Listing of complaints involving toasters and toaster ovens from the Association of Trial Lawyers of America.
- H Oconomowoc Fire Department Report.
- I Photographs of the toaster oven.
- J Photographs taken by insurance company investigators.

REPORT

ON

INSPECTION OF ELECTRICAL EQUIPMENT

FROM

129 SAEGER ROAD

OCONOMOWOC, WISCONSIN

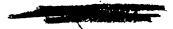
FOR

HERITAGE MUTUAL INSURANCE COMPANY

P.O. BOX 14697 .

WEST ALLIS, WISCONSIN 53214

CLAIM NO. B 72 670 - 2 EW



930820CCC2508 Ex. B RMR-MKE

KRAGH ENGINEERING, INC.

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90-361

OCTOBER 2, 1990

1.0 INTRODUCTION

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This report concerns the inspection of electrical systems from d. Oconomowoc, Wisconsin. The items from this fire were delivered to Kragh Engineering, Inc., and no inspection of the site was conducted by any employee of Kragh Engineering, Inc.

The loss occurred on August 6, 1990.

The purpose of the inspection, made at the office of Kragh Engineering, Inc. on September 25 and 26, 1990, was to determine if any of the electrical equipment failed in a manner causative of the fire.

I took the photographs which are a part of this report.

2.0 OBSERVATIONS

2.1 Examination of Outlets

Two electrical outlets with attached wiring and face plates were furnished for my examination.

The outlet identified as the "South Kitchen Outlet" was relatively undamaged on the face

(photo #1). The outlet body was similarly unremarkably damaged, and there were no signs of any overheating in the outlets which might have caused the fire. It was noted in the south kitchen outlet that the hot and neutral wires were reversed (photos #2 and 3). The outlet plate shows some smoke damage to the outer surface (photo #4), but there are no indications of any significant damage to the inside surface of the plate (photo #5).

The north outlet was a polarized two-wire device (photo #6). Damage to the outlet face was insignificant as was damage to the outlet body (photos #7 and 8). Connection polarity was proper in this device. The outlet plate shows some smoke damage to the exterior surface (photo #9), but not to the interior surface (photo #10).

2.2 Examination of Cordless Vacuum

B

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Among the items furnished from near the origin of the fire was a cordless vacuum cleaner manufactured by the Black and Decker Corporation (photo #11). The charger had been inserted into an outlet at the time of the fire (photo #12), but there were no signs of any overheating in the

transformer (photo #13). The exterior housing of the transformer had been melted away, but the interior had been protected from the heat of the fire.

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The cordless vacuum cleaner itself appeared to have been in its charging cradle at the time of the fire (photo #14). Examination of this device revealed that there were no signs of any internal heating nor were there signs of any fire inside the dust bag. The whole device was melted down by heat from an external source (photo #15).

2.3 Examination of Toaster-Oven

A toaster-oven identified as a Black and Decker model was recovered from the area identified as the area of origin of the fire. The remains of this appliance were furnished to Kragh Engineering for examination.

The cord from the toaster oven had broken off the appliance and had been recovered separately (photo #16). There was no arcing on the end of the cord where it had broken away (photo #17). Markings on the plug were identical to those on the plug furnished with a recently-purchased

Black and Decker Model TR035 toaster-oven.

Photos #18, 19, and 20 show the markings on the plug of the toaster-oven involved in the fire.

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The plastic components of the toaster-oven had been destroyed during the course of the fire, and only the metallic and ceramic parts of the toaster-oven survived the fire. The glass for the door was also not recovered after the fire.

Overall views of the toaster-oven as recovered are provided in photos #21 through 27.

The toaster-oven tray was linked to the oven door and came out when the door was opened. Items inside the oven as found are shown in photo #28. These items were removed and inspected, and there was no evidence whatever of there having been anything inside the oven except for the oven rack and the drip tray. Examination of these two items is recorded in photos #29 through 32. The oven interior with these items removed is shown in photo #33.

The steel top and rear piece was removed to facilitate the inspection of the heating elements. Photo #34 shows the upper heating elements as seen from the top of the toaster-

oven.

The control panel is on the right side of the toaster oven in the front (photos #35 and 36). The upper control is the bake control which controls the on/off functions and the temperature setting. The mechanical part of the switch is behind the upper circular cutout, visible in photo #35. The knob and plunger for this control switch are plastic and were destroyed in the fire. The pilot lamp, indicating that the heating element is on, is visible behind the square cutout in the panel (photos #35 and 36). To its left is the vertical slot for the toast lever. Below the toast lever is the darkness setting for the toaster. All the control knobs and the cover over the lamp were plastic and did not survive the fire.

Photos #37 and 38 show a detailed view of the toaster-oven controls, and photos #39 through 42 show the bake controller switch parts. The toaster oven is turned off when the bake controller is fully counter-clockwise. This pushes the plastic plunger through the hole in the outer contact arm and engages the inner contact arm pushing it away from the outer

contact. There were no indications of a contact failure.

Photo #43 shows a close-up view of the toast control components. Damage to these components was not as severe as was the damage to the bake components. Photo #44 shows the bottom of the control section including the two-pole switch that opens whenever the oven door is opened.

The lower heating elements show considerably more distortion than do the upper heating elements.

The inspection of the lower heating elements is recorded in photos #45, 46, and 47.

2.4 Discussion

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It has been established by others that the toaster oven was in the area of origin of the fire. The fact that the plug for the toaster-oven is not polarized negates any involvement of a miswired (hot and neutral reversed) receptacle. Examination of the toaster oven reveals that there was a significant amount of heat in the device and that the lower heating elements, although surrounded by steel in the bottom part of the toaster-oven, were significantly

distorted. Based upon this distortion, it can be reasonably assumed that the plug for the device was inserted into a live receptacle at the time of the fire.

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Damage to the toaster-oven is consistent with the contacts of the bake switch being in the closed position. As there was no evidence of any food or other materials in the oven at the time of the fire, it is not likely that the switch had been left ON.

The design of the switch, as noted elsewhere in this report, is such that to open the contacts and turn the heating elements OFF, it is necessary that the plunger associated with the switch be fully extended from the switch and physically push the contacts apart. The pieces which are relied upon to perform this function are plastic. It is most likely that the plastic plunger deformed from the temperatures present during normal use and physically became too short to perform the on/off function satisfactorially. This allowed the contacts to close and energize the heating elements with the switch in the OFF position.

As such, the design of the switch on the toasteroven is defective and dangerous and is directly responsible for the ignition of this fire.

3.0 COMMENTS AND CONCLUSIONS

I

Based upon my observations and analysis, and based upon the information that the toaster-oven was at the origin of the fire, I offer the following comments and conclusions:

- 3.1 The toaster oven failed in a manner causative of the fire.
- 3.2 The design of the Bake Control Switch is dangerous and defective.
- 3.3 The Bake Control Switch failed in a manner causative of the fire.

Paul Wm. Hansen
Registered Professional
Engineer

CIRCUIT COURT

STATE OF WISCONSIN

WAUKESHA COUNTY

NAME OF STREET

HERITAGE MUTUAL INSURANCE COMPANY, a domestic corporation, FREDERICK PLAUTZ, SR., and AMERICAN FAMILY MUTUAL INSURANCE COMPANY, a domestic corporation,

Plaintiffs CYNTHIA ERMST CLERK OF COURTS

VS.

Case No.

92CV2137

BLACK & DECKER (U.S.) INC. SEP 2 1 1992 a foreign corporation,

THIS IS AN AUTHEN FICATED COPY OF AN Defendant GIGNAL DOCUMENT FILED IN THE CLERK OF COURTS OFFICE WAUKESHA COUNTY.

- dani moden en hiawasiay

SUMMONS

THE STATE OF WISCONSIN

To each person named above as a defendant:

YOU ARE HEREBY NOTIFIED that the plaintiffs named above have filed a lawsuit or other legal action against you. The complaint, which is attached, states the nature and basis of the legal action.

Within twenty (20) days of receiving this summons, you must respond with a written answer, as that term is used in chapter 802 of the Wisconsin statutes, to the complaint. The court may reject or disregard an answer that does not follow the requirements of the statutes. The answer must be sent or delivered to the court, whose address is Waukesha County Clerk of Courts, Waukesha County Courthouse, 515 West Moreland Boulevard, Waukesha, Wisconsin 53188, and to plaintiffs' attorneys, whose addresses are below. You may have an attorney help or represent you.

If you do not provide a proper answer within twenty (20)

930820 CCC 2508 Ex. C RNR-MKE days, the court may grant judgment against you for the award of money or other legal action requested in the complaint, and you may lose your right to object to anything that is or may be incorrect in the complaint. A judgment may be enforced as provided by law. A judgment awarding money may become a lien against any real estate you own now or in the future, and may also be enforced by garnishment or seizure of property.

Dated: 9/1/92

P.O. ADDRESS: 10101 West Greenfield Avenue Milwaukee, WI 53214-0248 (414) 774-9505

Dated: 2 1992

P.O. ADDRESS:
735 North Water Street
Suite 800
Milwaukee, WI 53202
(414) 273-2905

Dated: 1992

P. O. ADDRESS:
Fifth Floor, The Van Buren Building
733 North Van Buren Street
Milwaukee, WI 53202
(414) 225-4060

ANDREW M. BATH
Attorney for Heritage
Mutual Insurance Company

: MANDREW M. BATH

VLASAK, ROSENBAUM, WEEDE & BRITTON, S.C. Attorneys for Christopher G. Natzke and Karen D. Natzke

BY:
RAI.PH K. ROSENBAUM

FELLOWS, PIPER & SCHMIDT
Attorneys for American Family
Mutual Insurance Company

BY: '\
TERRY J. BOOTH

-2-

HERITAGE MUTUAL INSURANCE COMPANY, a domestic corporation, FREDERICK PLAUTZ, SR., and AMERICAN FAMILY MUTUAL INSURANCE COMPANY, a domestic corporation TINTHIA ERNST CLERK OF COURTS

Plaintiffs,

vs.

SEP 2 1 1992 Case No.

92CV2137

BLACK & DECKER (U.S.) TWO AN AUTHENTICATED COPY OF AN AUTHENTICATED COP

Defendant.

ton, Robert G. Mawdsley

COMPLAINT

As and for a complaint against Black & Decker (U.S.)

Inc. (hereinafter Black & Decker), Christian and
by their attorney, Ralph K. Rosenbaum, Jr.;

Heritage Mutual Insurance Company (hereinafter Heritage), by its

attorney, Andrew M. Bath; and American Family Mutual Insurance

Company (hereinafter American Family), by its attorney, Terry J.

Booth, allege as follows:

- 1. Let is an adult resident of Oconomowoc, Wisconsin, residing a Law. At all times relevant hereto, he was a tenant in a single family home located Law. Yillage of Lac La Belle, Wisconsin (hereinafter the home).
- Wisconsin, residing across the state of Oconomowoc,

relevant hereto, she was the wife of the and and was a tenant in the home.

- 3. Heritage is a domestic insurance corporation licensed to transact business in the State of Wisconsin, having its home office at 22 to the large is sued a policy of insurance to an analysis and said policy was in full force and effect at all times material hereto.
- 4. Frederick Plautz, Sr., is an adult resident of the State of Florida. At all times material hereto, he was the owner of the home. Frederick Plautz, Sr. has been made a party to this action pursuant to Wis. Stat. §803.03. No claim is made in this action against Mr. Plautz, or on his behalf.
- 5. American Family is a domestic insurance corporation licensed to transact business in the State of Wisconsin, having its home office located at P.O. Box 7430, Madison, Wisconsin. American Family issued a policy of insurance to Frederick Plautz, Sr. At all times material hereto, the policy of insurance issued by American Family to Frederick Plautz, Sr. was in full force and effect, and provided coverage for certain damages which might be incurred as a result of fire at the home.
- 6. Black & Decker is, and at all times material hereto has been, a foreign corporation doing business in Wisconsin and having offices located at 6 Armstrong Road, Shelton, Connecticut. Black & Decker's registered agent for service of process is C T Corporation Systems, Suite 1000, 44 East Mifflin Street, Madison,

Wisconsin.

- 7. On August 6, 1990, a fire occurred at the home (hereinafter the fire). The fire was caused by a toaster oven (hereinafter the soven).
- that they incurred damages in an amount to be determined as a result of the fire.
- 9. Heritage alleges that under and pursuant to its aforementioned policy of insurance it paid for damages caused by the fire in the amount of \$18,694.63, and may make additional such payments in the future. Heritage alleges that by virtue of those payments, it is subrogated to the rights of the to the extent of those payments against any persons, firms or corporations who are or shall be adjudged legally liable for the occurrence of the fire and the resulting damage.
- 10. American Family alleges that under and pursuant to its aforementioned policy of insurance it paid for damages caused by the fire in the amount of \$33,784.48, and may make additional such payments in the future. American Family alleges that by virtue of those payments, it is subrogated to the rights of Frederick Plautz, Sr. to the extent of those payments against any persons, firms or corporations who are or shall be adjudged legally liable for the occurrence of the fire and the resulting damage.

FIRST CAUSE OF ACTION

11. Reallege and incorporate herein by reference each

of the allegations stated hereinbefore.

- 12. Black & Decker negligently designed and/or manufactured the oven.
- 13. The fire and resulting damages were a direct and proximate result of the aforestated negligence of Black & Decker.

 2011 The Province to SECOND CAUSE OF ACTION
- 14. Reallege and incorporate herein by reference each of the allegations stated hereinbefore.
- condition unreasonably dangerous to the users of said oven.

 purchased the oven.
- 16. Black & Decker is engaged in the business of selling such ovens, and such ovens-are expected to, and in this case did, reach the user without substantial change in the condition in which it was sold.
- 17. The fire and resulting damages were a direct and proximate result of the existence of the defect identified in the foregoing paragraphs, and Black & Decker is strictly liable therefore.

THIRD CAUSE OF ACTION

- 18. Reallege and incorporate herein by reference each of the allegations stated hereinbefore.
- 19. Black & Decker is a merchant of toaster ovens like the oven.
- 20. Black & Decker breached the implied warranty of merchantability established by Wis. Stat. §402.314.
 - 21. The fire and resulting damages were a direct and